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31

AMENDED CLAIMS

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original claims 1-42 replaced by new claims 1-20 (4 pages)]

Claims

1. A method for compensating a transverse elongation and/or a longitudinal elongation of a material (03) to be imprinted, wherein the material (03) to be imprinted successively passes through printing groups (04), arranged one behind the other, of a printing press (01) wherein a portion of the transverse elongation and/or the longitudinal elongation of the material (03) to be imprinted, which is known at the time of the application of an image to at least one printing forme (08) to be arranged in the downstream-located printing group (04), is compensated by means of a design and/or a positioning of a print image location (09) on the printing forme (08), characterized in that, in addition to the preset compensation by means of the design and/or positioning of the print image location (09) on the printing forme (08), a portion of the transverse elongation occurring during an ongoing printing process by means of the printing press is compensated by means of an image regulator (38) after the material (03) to be imprinted has passed through one printing group (04) and prior to its entry into the downstream-located printing group (04), wherein a further portion of the transverse elongation is compensated by a displacement of at least one printing forme (08) on the

AMENDED PAGE (ARTICLE 19)

downstream-located printing group (04) in relation to a reference marker (M) of the material (03) to be imprinted and transversely in respect to the production flow (P) of the material (03) to be imprinted.

2. The method in accordance with claim 1, characterized in that the image regulator (38) deforms the material (03) to be imprinted in a wave shape.

3. The method in accordance with claim 1, characterized in that the factor DQ of transverse elongation is a function of a mechanical elongation and/or a moisture-related elongation of the material (03) to be imprinted.

4. The method in accordance with claim 1, characterized in that the factor DQ of the transverse elongation changes.

5. The method in accordance with claim 1, characterized in that at least one printing group (04) of two printing groups arranged one behind the other, which has forme cylinders (07) and/or ink-transferring cylinders (06), is driven by a controllable drive mechanism.

6. The method in accordance with claim 5, characterized in that a phase relation assumed between the forme cylinders (07) and/or by the ink-transferring cylinders (06) of at least two printing groups (04) is controlled as a function of the factor DL of a longitudinal elongation of the material (03) to be imprinted..

7. The method in accordance with claim 6, characterized in that the phase relation of the forme cylinders (07) and/or of the ink-transferring cylinders (06) is continuously controlled.

8. The method in accordance with claim 6, characterized in that the phase relation of the forme cylinders (07) and/or of the ink-transferring cylinders (06) is controlled in the course of the ongoing printing process.

9. The method in accordance with claim 1, 5 or 6, characterized in that the image regulator (38) and/or the drive mechanisms and/or the phase relation of the forme cylinders (07) and/or the ink-transferring cylinders (06) are controlled from a

control console assigned to the printing press (01).

10. The method in accordance with claim 6, characterized in that at least one position (X_1, Y_1) of a center point (S) of at least one print image location (09) of a printing forme (08) is changed by operating the drive mechanism which drives the forme cylinder (07) and/or the ink-transferring cylinder (06).

11. The method in accordance with claim 10, characterized in that the position (X₁, Y₁) of the center point (S) of at least one print image location (09) is changed in the course of the ongoing printing process.

12. The method in accordance with claim 10, characterized in that the position (X₁, Y₁) of the center point (S) of at least one print image location (09) is changed by a control unit as a function of the color tone of the ink-transferring cylinder (06) and/or the arrangement of the printing group (04) with the forme cylinder (07) supporting the printing forme (08) in the production flow (P) of the material (03) to be imprinted and/or of the position of the printing forme (08) arranged on the forme cylinder (07).

13. The method in accordance with claim 1, characterized in that at least one center point (SB) of the print image (11) which is to be mutually printed from different print image locations (09) is detected by a detection device, which is connected with the control unit.

14. The method in accordance with claim 13, characterized in that the center point (SB) of the print image (11) is changed by means of an actuation of the image regulator (38).

15. The method in accordance with claim 10 or 14, characterized in that the drive mechanism driving the forme cylinder (07) and/or the ink-transferring cylinder (06), and/or the image regulator (38) are operated by the control unit in such a way that the position (X₁, Y₁) of the center point (S) of the print image locations (09) printing a common print image (11) matches the center point (SB) of the print image (11).

16. The method in accordance with claim 1, characterized in that, transversely in respect to the production

flow (P) of the material (03) to be imprinted, the image regulator (38) directs the air flow from at least three air nozzles onto the material (03) to be printed.

17. The method in accordance with claim 16, characterized in that air flow of the air nozzle arranged between two air nozzles is preferably directed counter to the air flow of its adjoining air nozzles.

18. The method in accordance with claim 1, characterized in that, based on a digital data set, the print image location (09) is applied to the printing forme (08) by an image application system.

19. The method in accordance with claim 18, characterized in that a position of the printing forme (08) to be arranged in one of the printing groups (04) is taken into consideration by the image application system when creating the print image location (09) on the printing forme (08) by means of a distribution plan created in a pre-printing stage.

20. The method in accordance with claim 1, characterized in that the print image (11) is detected by an arrangement which optically detects and digitally evaluates the print image (11).